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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,560	07/16/2003	Kenichi Ooshima	008312-0304933	5935
909	7590	11/01/2005	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP			ALEMU, EPHREM	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	
			2821	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/619,560	OOSHIMA, KENICHI	
	Examiner	Art Unit	
	Ephrem Alemu	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/03, 12/04, 7/05</u> | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u> |

Continuation of Attachment(s) 6). Other: English translation of Japan 07-115656.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The following paragraphs contains lines that are not clearly readable:

(i) in page 2, paragraph 2, line 4 is not clearly readable;

(ii) in page 3, in paragraph 2, line 6 is not clearly readable;

(iii) in page 4, paragraph 3, line 5 is not clearly readable;

(iv) in page 5, the description of Fig. 5, line 2 is not clearly readable;

(v) in page 6, in paragraph 2 of the detailed description, line 5 is not clearly readable;

(vi) in page 7, in paragraph 2, line 9 is not clearly readable;

(vii) in page 8, in paragraph 2, line 1 is not clearly readable;

(viii) in page 9, in paragraph 3, line 4 is not clearly readable;

(ix) in page 10, line 14 is not clearly readable;

(x) in page 11, in paragraph 2, line 8 is not clearly readable;

(xi) in page 12, in paragraph 1, line 14 is not clearly readable; and

(xii) in page 13, in paragraph 1, line 14 is not clearly readable.

Appropriate correction is required.

In page 3, line 11, change "CRD" with --CRT-- to correct minor typographical error.

Claim Objections

Claims 1, 3, 4, 5 are objected to because of the following informalities: The following claims contains lines that are not clearly readable:

- (i) in claim 1, line 14 is not clearly readable;
- (ii) in claim 4, line 5 is not clearly readable; and
- (iii) in claim 5, line 5 is not clearly readable. Appropriate correction is required.

In claim 1, line 4, replace "each by comprising" with --each comprising--. Appropriate correction is required.

In claim 3, line 2, "claim 1" should be replaced with --claim 2-- since claim 3 is further limiting claim 2. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Hiroyuki (JP 07-115656).

Re claim 8, Hiroyuki discloses a magnetic shield device (4) for a CRT (1) having an electron gun (1a) arranged in a neck portion (2) of the CRT (1),

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the magnetic shield device (4) (Figs. 1, 2) comprising:

a cylindrical main body portion which can be attached to an outer periphery of the neck portion, has an inner diameter larger than an outer diameter of the neck portion, and covers an area of the electron gun (1a) except for a cathode portion (Figs. 1, 2); and

a constricted portion which extends from one end of an electron gun side of the main body portion, has a gradually decreasing diameter, and covers the cathode portion of the electron gun (Fig. 2a; see paragraphs [0012] & [0013] of the computer English translation of the 07-115656 attached herewith).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oku (US 5,499,061) in view of Suzuki et al. (US 6,577,052) further in view of Hiroyuki (JP 07-115656).

Re claims 1, Oku discloses a projection display apparatus that synthesizes and displays video images on a screen, the video images being projected by a plurality of projecting devices (i.e., cathode ray tubes rPRT, gPRT, bPRT) (Figs. 1, 3, 11), the plurality of projecting devices each comprising:

a CRT (Cathode Ray Tube rPRT, gPRT, bPRT) having a neck portion (NCK) (Figs. 1, 3, 11),

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a fluorescent screen (i.e., face plate panel PNL), and an electron gun arranged in the neck portion and including cathode, the CRT emitting an electron beam from the electron gun to the fluorescent screen (Figs. 1, 3, 11; Col. 4, line 42- Col. 5, line 27);

a deflecting yoke (DY) arranged around an outer periphery the CRT to deflect the electron beam from the electron gun (Figs. 1, 3, 11; Col. 5, lines 16-27);

Oku does not disclose a velocity modulating coil and a cylindrical magnetic shield.

In the same field of endeavor, Suzuki teaches of providing a velocity modulating coil (90) around an outer periphery of a neck portion of the CRT and between a deflecting yoke and the cathode for the purpose of improving the contrast of an image by changing the scan velocity of the electron beam to improve the quality of the displayed image (Fig. 10, Col. 15, lines 39-58).

Hiroyuki teaches of providing a cylindrical magnetic shield (4) on the neck part of a cathode ray tube for controlling track of the electron beam for the purpose of suppressing mis-alignment and mis-convergence of the beam and minimizing the influence of earth's magnetic field (Fig. 1; abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Oku's projection display apparatus by providing a velocity modulating coil around an outer periphery of a neck portion of the CRT as taught by Suzuki for the purpose of improving the contrast of an image by changing the scan velocity of the electron beam to improve the quality of the displayed image. Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify Oku's modified by Suzuki's projection display

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apparatus by providing cylindrical magnetic shield arranged around the outer periphery of the neck portion as taught by Hiroyuki for the purpose of suppressing mis-alignment and mis-convergence of the beam and minimizing the influence of earth's magnetic field as taught by Hiroyuki.

Re claim 2, given Oku's modified by Suzuki's further modified by Hiroyuki's projection display apparatus, the magnetic shield having a main body portion shaped like a cylinder which is concentric with an outer diameter of the neck portion and surrounding the velocity modulating coil, and a constricted portion being formed so as to cover a periphery of the cathode of the electron gun would have been obvious since Hiroyuki further discloses the magnetic shield (4) has a main body portion shaped like cylinder which is concentric with an outer diameter of the neck portion and a constricted portion extending from the main body portion toward an edge of the neck portion and having a gradually decreasing diameter, the constricted portion being formed so as to cover a periphery of the cathode of the electron gun (Fig. 2a; see paragraphs [0012] & [0013] of the computer English translation of the 07-115656 attached herewith).

Re claim 3, it would have been an obvious design choice for the magnetic shield axial dimension of the main portion over the constricted portion being between $\frac{1}{4}$ and $\frac{1}{3}$ for the Oku's modified by Suzuki's further modified by Hiroyuki's projection display apparatus.

6. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oku (US 5,499,061) in view of Dossot et al. (US 5,621,287).

Re claims 4-7, Oku discloses a projection display apparatus that synthesizes and displays video images on a screen, the video images being projected by a plurality of

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projecting devices (i.e., cathode ray tubes rPRT, gPRT, bPRT) (Figs. 1, 3, 11), the plurality of projecting devices each comprising:

a CRT (Cathode Ray Tube rPRT, gPRT, bPRT) having a neck portion (NCK) (Figs. 1, 3, 11),

a fluorescent screen (i.e., face plate panel PNL), and an electron gun arranged in the neck portion and including cathode, the CRT emitting an electron beam from the electron gun to the fluorescent screen (Figs. 1, 3, 11; Col. 4, line 42- Col. 5, line 27);

a deflecting yoke (DY) arranged around an outer periphery the CRT to deflect the electron beam from the electron gun (Figs. 1, 3, 11; Col. 5, lines 16-27);

Oku does not disclose a velocity modulating coil having an arm and a cylindrical magnetic shield having stays and a circuit board for driving the velocity modulating coil, wherein the arm, the stays and the circuit board being fixed together.

Dossot teaches of providing a velocity modulation coil (SVM) (50) with a cylindrical magnetic shield (i.e., static convergence magnet system (52)) overlapping the velocity modulation coil (50) for the purpose of suppressing mis-convergence and enhancing the perceived sharpness of the displayed picture.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Oku's projection display apparatus by providing a velocity modulating coil (SVM) (50) with a cylindrical magnetic shield (i.e., static convergence magnet system (52)) overlapping the velocity modulation coil (50) around an outer periphery of a neck portion of the CRT as taught by Dossot for the purpose of suppressing mis-convergence and enhancing the perceived sharpness of the displayed picture.

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Although, Dossot does not teach of forming an arm at one end of the velocity modulating coil, and stays to one end of the cylindrical magnetic shield (i.e., static convergence magnet system (52)) for attaching the arm and stays with a circuit board, it is well in the skill of an artisan at the time the invention was made to modify the velocity modulating coil by providing an arm and the cylindrical magnetic shield (i.e., static convergence magnet system (52)) by providing stays for the purpose of securely attaching the arm and stays with a circuit board that drives the velocity modulating coil to the neck of the display tube.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Van Kemenade et al. (US 5,485,054); Hirano (US 5,367,380); Priere et al. (US 5,223,769); also teach similar inventive subject matter.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F Flex hours.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

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more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EA
10-25-05



TUYET VO
PRIMARY EXAMINER